

## 100W QCW 808nm VCSEL Array Submodule Part # PQCW-CS1-100-W0808

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability, can operate at high temperatures (up to 80°C)
- High power density
- Wavelength stabilized & Narrow spectral width (~1nm)

### Optical & Electrical Characteristics

PARAMETER	CONDITIONS (1)	MIN	TYP	MAX	UNIT
QCW Output Power	120A, 20C Heat-sink	100	120	--	W
Threshold current	20C Heat-sink	--	10	15	A
Operating current	100W, 20C Heat-sink	--	100	120	A
Operating voltage	100W, 20C Heat-sink	--	2.8	3.2	V
Differential resistance	100W, 20C Heat-sink	--	10	15	mΩ
Slope efficiency	20C Heat-sink	1	1.1	--	W/A
Conversion efficiency	40W, 20C Heat-sink	40	45	--	%
Center wavelength	100W, 20C Heat-sink	800	808	816	nm
Spectral width (FWHM)	100W, 20C Heat-sink	--	1	2	nm
Wavelength shift	20C Heat-sink	--	--	0.070	nm/°C
N.A. (4-sigma)	100W, 20C Heat-sink	--	0.18	0.2	--
Emission area	--	--	4.7x4.7	--	mm <sup>2</sup>

(1) QCW conditions: 100μsec pulse-width / 0.3% duty cycle (30Hz)

### Maximum Absolute Ratings

PARAMETER	CONDITIONS
Forward current	150A
Reverse current	25μA
Operating temperature	0 to +80 °C
Storage temperature	-40 to +80 °C
Pulse width/duty-cycle	200μsec/2%

### Ordering information

PQCW - CS1 - 100 - W0808

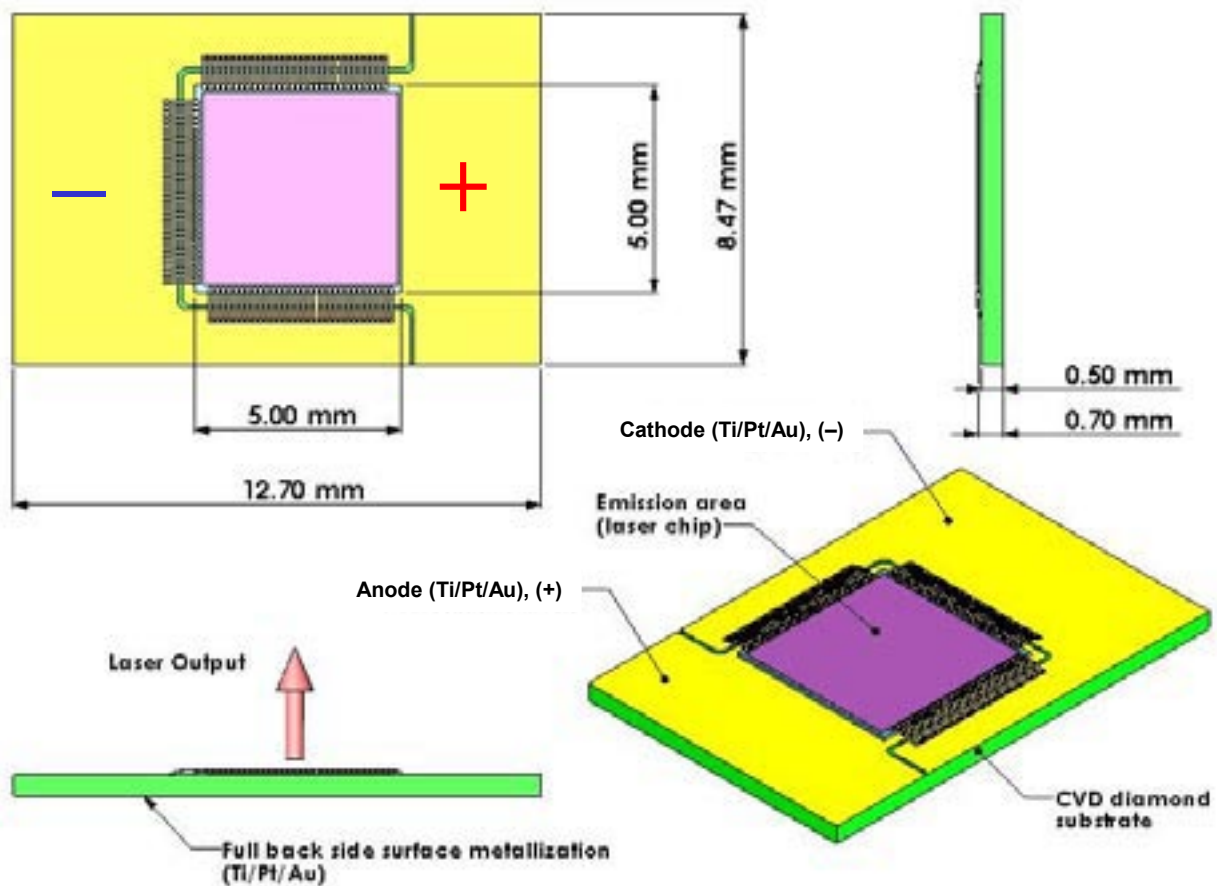
Package type

Wavelength (nm)

QCW Output Power (W)

## Mechanical Characteristics

PARAMETER	VALUE
Package width	8.47 +/-0.1 mm
Package length	12.70 +/-0.1 mm
Package height	0.70 +/-0.1 mm
Thermal resistance	< 0.3 °C/W
Max solder temperature	140 °C
Metalization	Ti/Pt/Au + 12 $\mu$ m Au



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Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eye-wear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear eye protection when operating.



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